CME Group

AutoCert + CME Europe FIX/FAST
User Manual

4/15/2014

Futures trading is not suitable for all investors, and involves the risk of loss. Futures are a leveraged investment, and because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for a futures position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles. And only a portion of those funds should be devoted to any one trade because they cannot expect to profit on every trade.

All references to options refer to options on futures.

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All matters pertaining to rules and specifications herein are made subject to and are superseded by official CME, CBOT, and NYMEX rules. Current rules should be consulted in all cases concerning contract specifications.

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Please submit user experience feedback about this help system.

Getting Started

The AutoCert+ tool is an automated testing tool for validating application functionality. It provides an easy-to-use web interface for walking through CME Group certification scenarios.

To facilitate the process of connecting a customer application, CME Group provides a dedicated certification environment to allow customers to test their systems before they complete certification.

The AutoCert+ CME Europe FIX/FAST tests focus on the Market Data Platform FIX/FAST 2.0 Test Suite.

Note: Where possible, AutoCert + logs messages in the FIX/FAST format.

To run and navigate AutoCert+:

1. Log into the automated certification tool.
2. Review general AutoCert+ test suite navigation and general interview information.
3. Complete the Interview for this test suite.
4. Complete applicable test cases.
5. Complete the certification process from the Post Certification tab.

Note: TCP functionality may be disabled for some tests. In that situation, your application should use the Market Snapshot channel.

What's New

The list below illustrates the updates made to the AutoCert+ CME Europe FIX/FAST Help system.

Date	Author	Topic	Description
4/14/14	JJ	All	Updated links and edited to meet Help standards
2/10/14			Miscellaneous updates.
4/30/13		All	New Content for CME Europe.

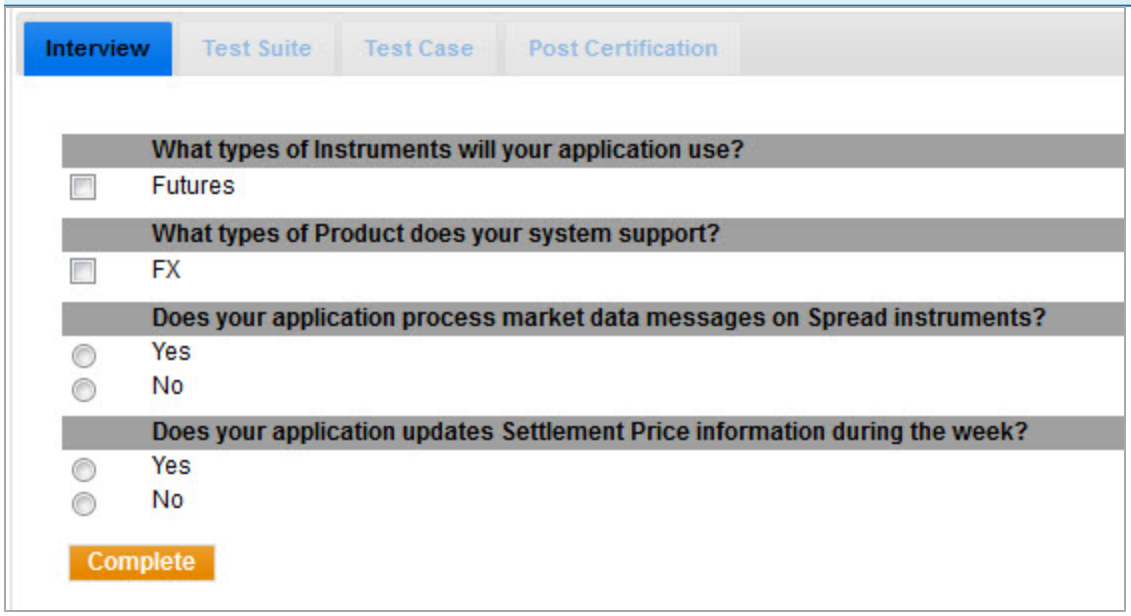
Interview

The interview consists of a series of questions about your trading application. Based on your responses, certain tests are required and others are optional. You must complete the pre-certification interview before running the test cases.

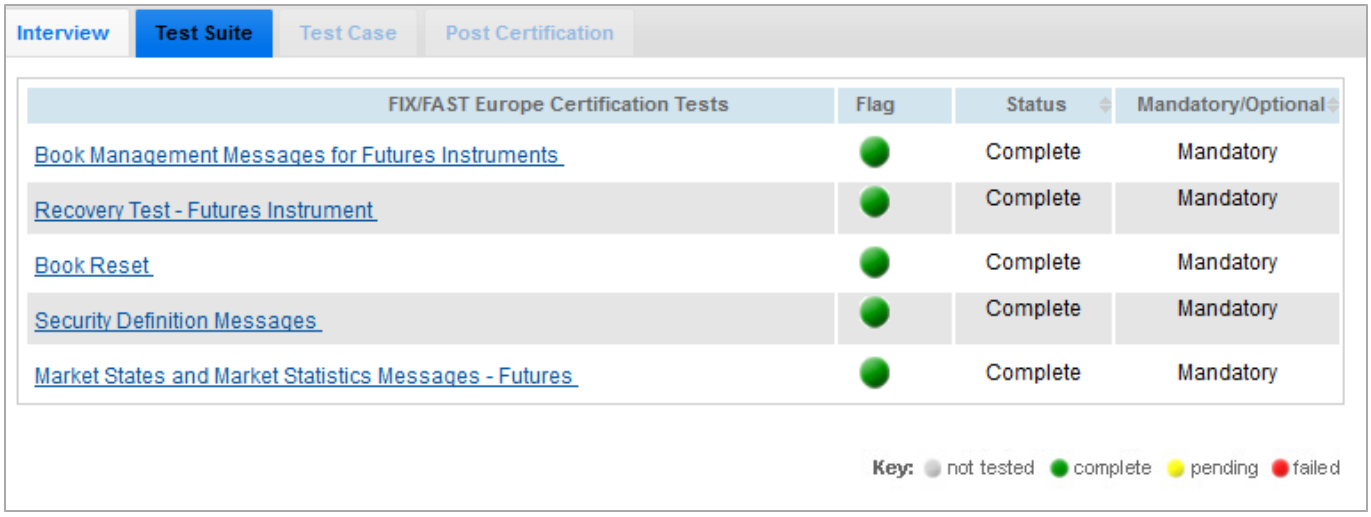
To complete the interview:

Answer each question and click "**Complete**" when finished.

Note: The items selected in the Interview will determine what types of instruments are tested.

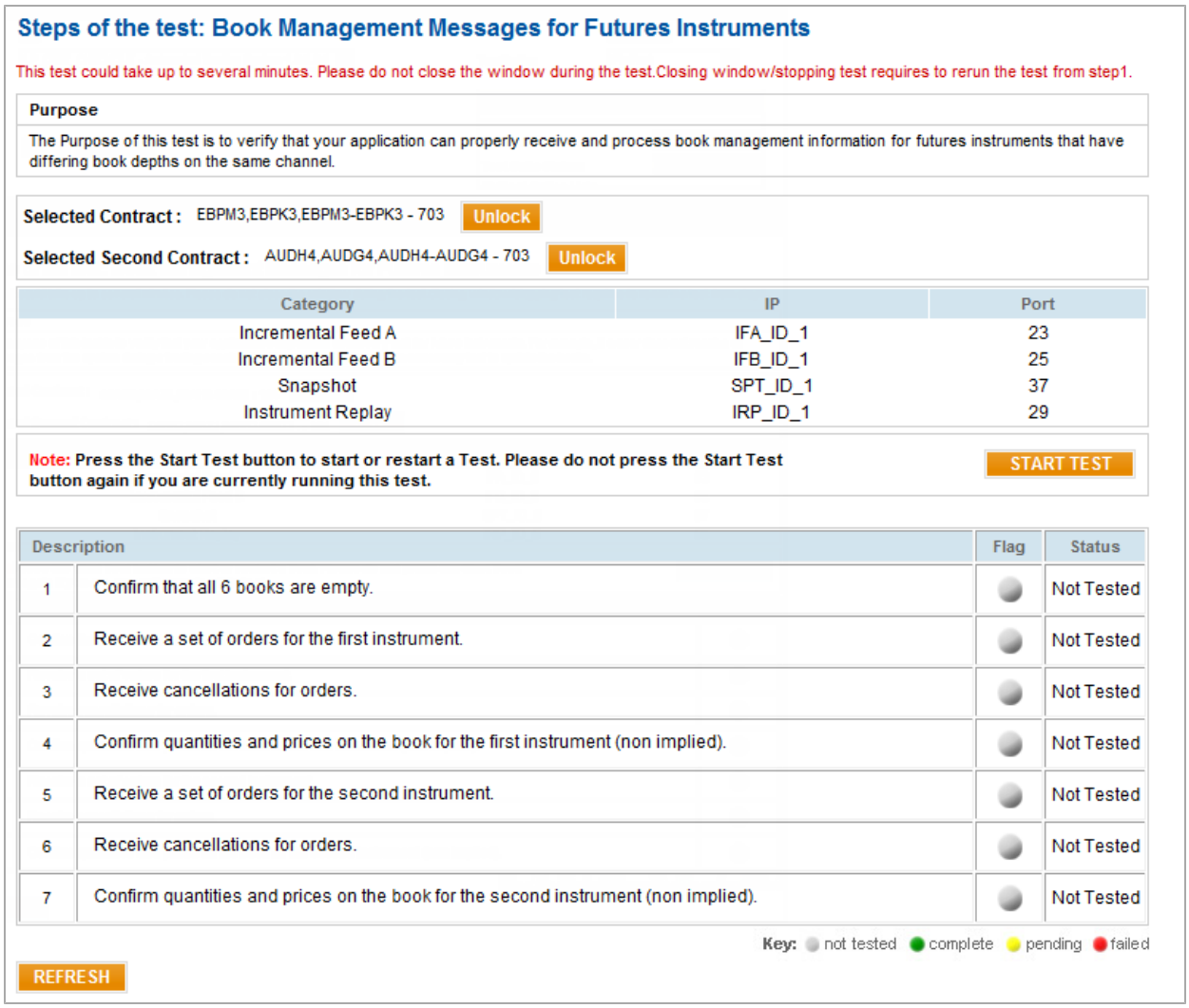


Test Suite Following Successful Runs



Book Management Messages (Futures)

This test verifies that your application can properly receive and process book management information [Market Data Incremental Refresh (tag 35-MsgType=X) messages] for futures instruments that have differing book depths on the same channel.



Steps of the test: Book Management Messages for Futures Instruments

This test could take up to several minutes. Please do not close the window during the test.Closing window/stopping test requires to rerun the test from step1.

Purpose

The Purpose of this test is to verify that your application can properly receive and process book management information for futures instruments that have differing book depths on the same channel.

Selected Contract : EBPM3,EBPK3,EBPM3-EBPK3 - 703 Unlock

Selected Second Contract : AUDH4,AUDG4,AUDH4-AUDG4 - 703 Unlock

Category	IP	Port
Incremental Feed A	IFA_ID_1	23
Incremental Feed B	IFB_ID_1	25
Snapshot	SPT_ID_1	37
Instrument Replay	IRP_ID_1	29

Note: **Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.** START TEST

	Description	Flag	Status
1	Confirm that all 6 books are empty.		Not Tested
2	Receive a set of orders for the first instrument.		Not Tested
3	Receive cancellations for orders.		Not Tested
4	Confirm quantities and prices on the book for the first instrument (non implied).		Not Tested
5	Receive a set of orders for the second instrument.		Not Tested
6	Receive cancellations for orders.		Not Tested
7	Confirm quantities and prices on the book for the second instrument (non implied).		Not Tested

Key: not tested complete pending failed

REFRESH

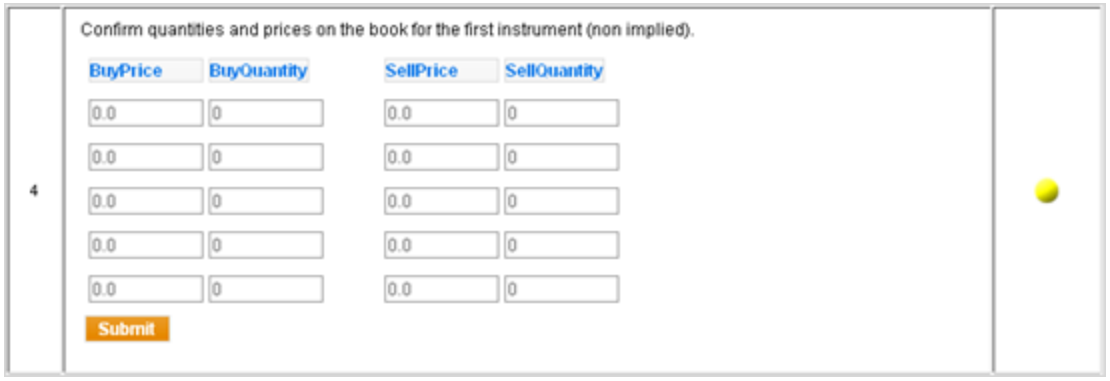
To run the Book Management Messages for Futures Instruments test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click "**START TEST**."

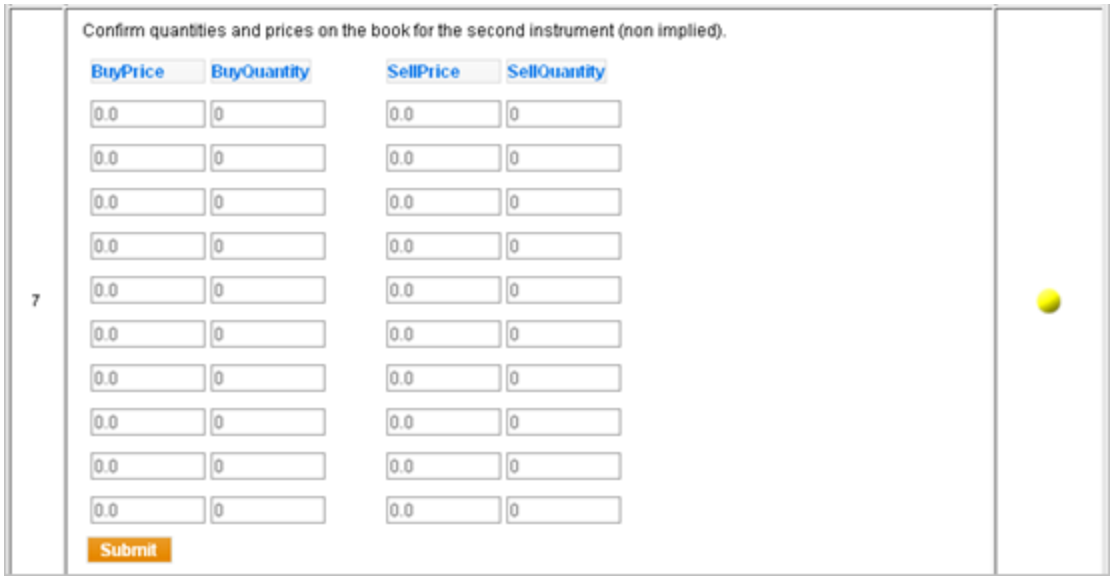
   Note: DO NOT select the **"START TEST"** button once the test process is in progress.

   AutoCert+ clears the order book for both instruments.
3. Confirm that all 6 books for the locked instruments are empty.
4. Receive market data [Market Data Incremental Refresh (tag 35-MsgType=X) messages] for a set of orders for the first instrument.
5. Receive cancellations for the orders.

6. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the first instrument.
7. Click "**Submit**."

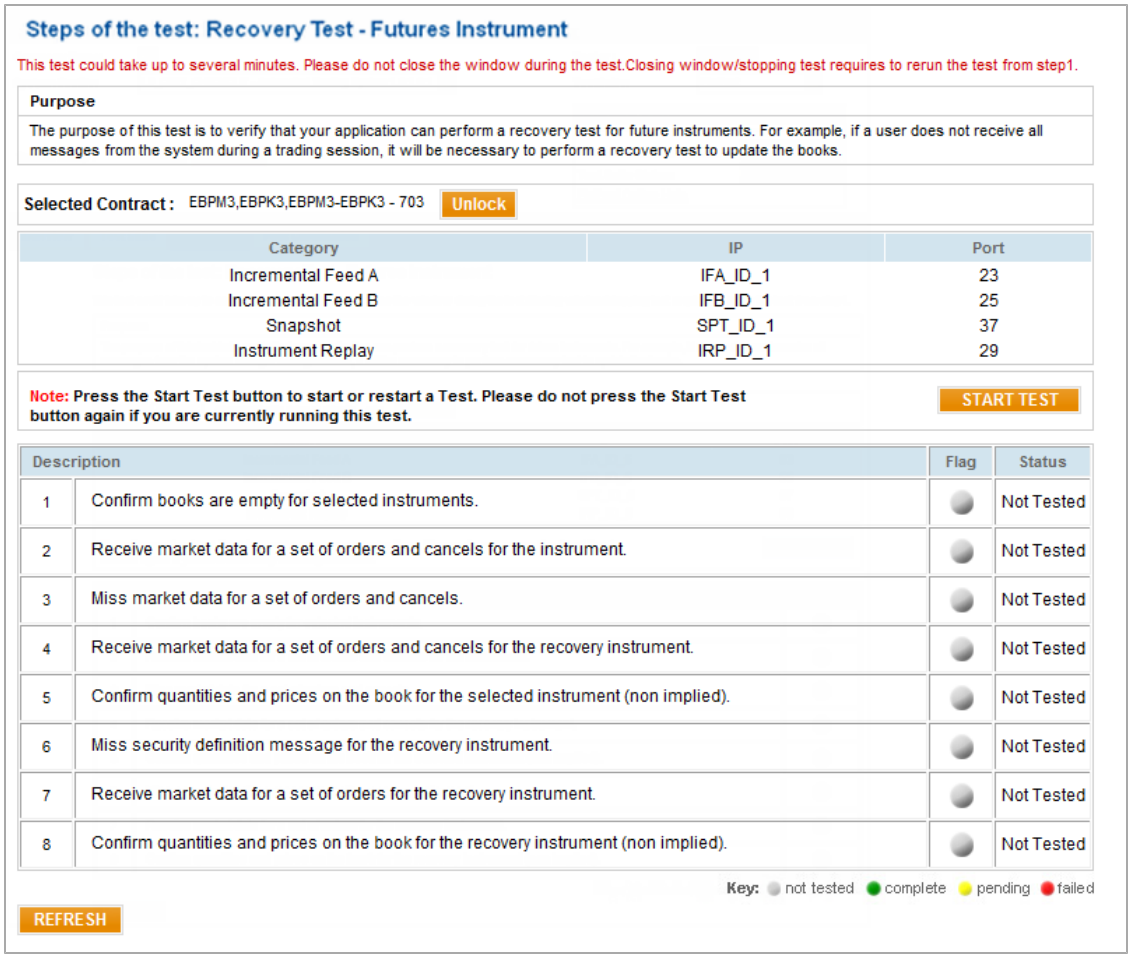


8. Receive market data [Market Data Incremental Refresh (tag 35-MsgType=X) messages] for a set of orders for the second instrument.
9. Receive cancellations for the orders.
10. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book for the second instrument.
11. Click "**Submit**."



Recovery Test (Futures)

This test verifies that your application can perform a recovery for Futures contracts (non-implied).



Steps of the test: Recovery Test - Futures Instrument

This test could take up to several minutes. Please do not close the window during the test.Closing window/stopping test requires to rerun the test from step1.

Purpose

The purpose of this test is to verify that your application can perform a recovery test for future instruments. For example, if a user does not receive all messages from the system during a trading session, it will be necessary to perform a recovery test to update the books.

Selected Contract : EBPM3,EBPK3,EBPM3-EBPK3 - 703 Unlock

Category	IP	Port
Incremental Feed A	IFA_ID_1	23
Incremental Feed B	IFB_ID_1	25
Snapshot	SPT_ID_1	37
Instrument Replay	IRP_ID_1	29

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

	Description	Flag	Status
1	Confirm books are empty for selected instruments.		Not Tested
2	Receive market data for a set of orders and cancels for the instrument.		Not Tested
3	Miss market data for a set of orders and cancels.		Not Tested
4	Receive market data for a set of orders and cancels for the recovery instrument.		Not Tested
5	Confirm quantities and prices on the book for the selected instrument (non implied).		Not Tested
6	Miss security definition message for the recovery instrument.		Not Tested
7	Receive market data for a set of orders for the recovery instrument.		Not Tested
8	Confirm quantities and prices on the book for the recovery instrument (non implied).		Not Tested

Key: not tested complete pending failed

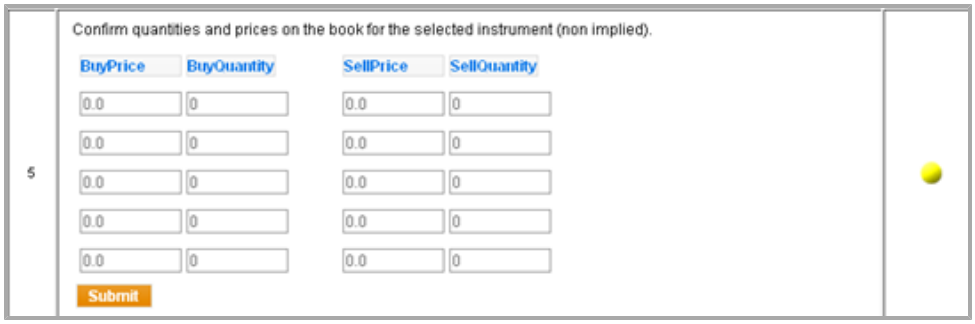
REFRESH

To run the Recovery Test - Futures Instrument test:

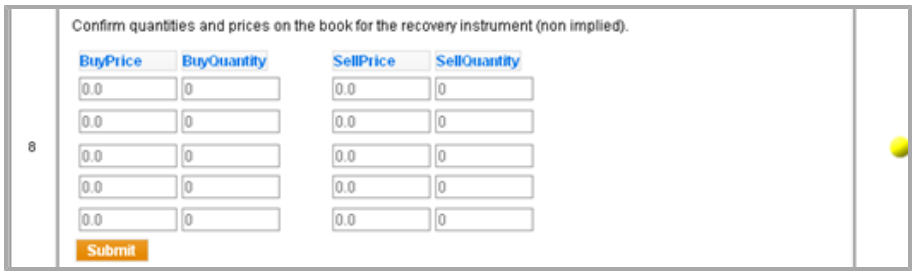
1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click "**START TEST**."

   Note: DO NOT select the **"START TEST"** button once the test process is in progress.

   Note: Once you reserve an instrument, no other tester can use it.
3. Confirm that all 3 books are empty.
4. Receive market data for a set of orders and cancels for the instrument.
5. Confirm that your application has missed several book updates by viewing the AutoCert+ log files.
6. Receive market data for a set of orders and cancels for the instrument.
7. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) for the order book received by your application.
8. Click "**Submit**."

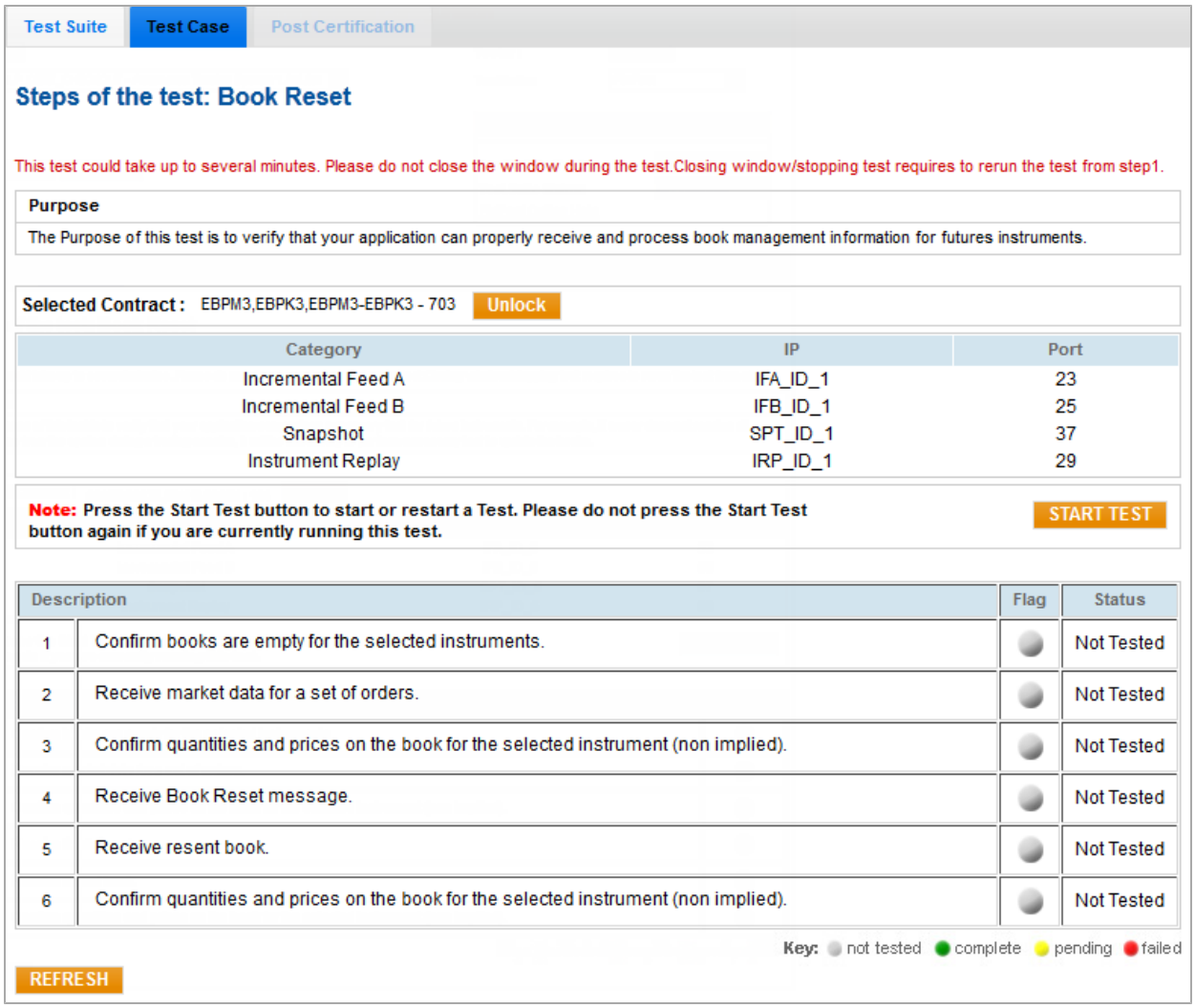


9. Confirm that a Security Definition message was missed for a contract not in the set chosen by viewing the AutoCert+ log files.
10. Receive the previously missed book updates, a Security Definition message, and process the corresponding book updates.
11. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the order book for the recovered instrument.
12. Click "**Submit**."



Book Reset

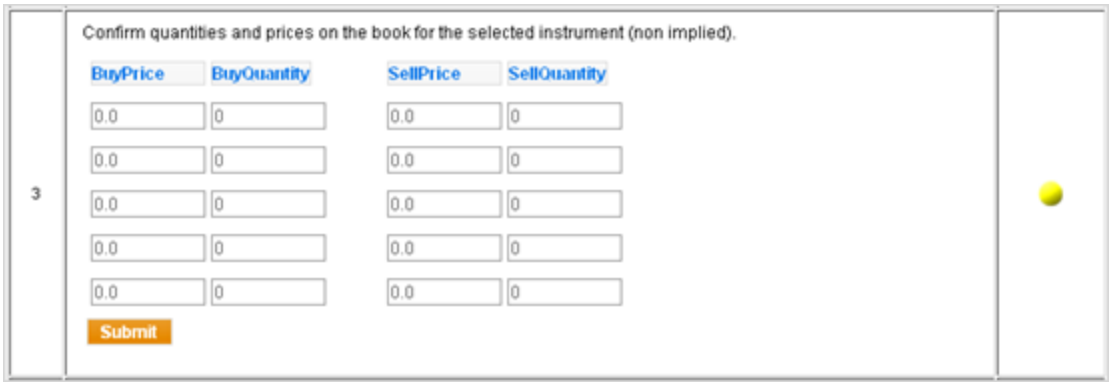
This test verifies that your application can receive and process a Book Reset message, empty the books, and then properly receive and process the resent books.


Test Suite
Test Case
Post Certification
Steps of the test: Book Reset
This test could take up to several minutes. Please do not close the window during the test.Closing window/stopping test requires to rerun the test from step1.
Purpose
The Purpose of this test is to verify that your application can properly receive and process book management information for futures instruments.
Selected Contract : EBPM3,EBPK3,EBPM3-EBPK3 - 703
Unlock
Category
IP
Port
Incremental Feed A
IFA_ID_1
23
Incremental Feed B
IFB_ID_1
25
Snapshot
SPT_ID_1
37
Instrument Replay
IRP_ID_1
29
Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.
START TEST
Description
Flag
Status
1
Confirm books are empty for the selected instruments.
Not Tested
2
Receive market data for a set of orders.
Not Tested
3
Confirm quantities and prices on the book for the selected instrument (non implied).
Not Tested
4
Receive Book Reset message.
Not Tested
5
Receive resent book.
Not Tested
6
Confirm quantities and prices on the book for the selected instrument (non implied).
Not Tested
Key: not tested complete pending failed
REFRESH

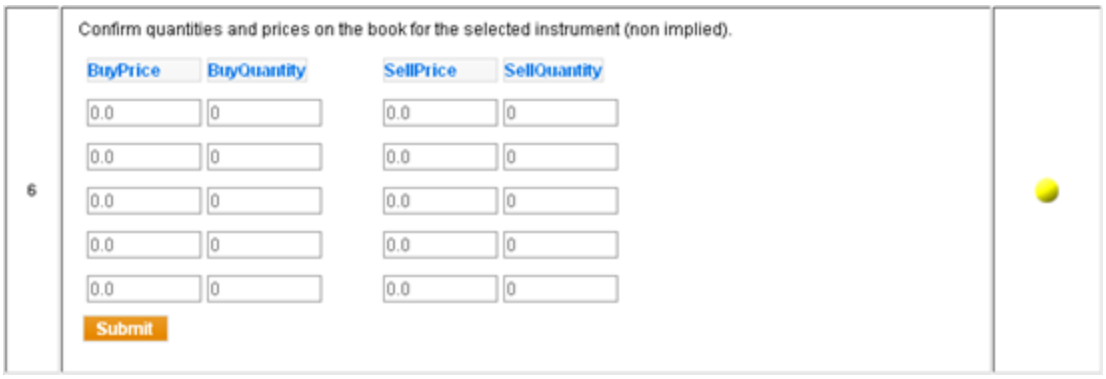
To run the Book Reset test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click "**START TEST**."

   Note: DO NOT select the **"START TEST"** button once the test process is in progress.
3. Confirm that the order book for the selected instrument is empty.
4. Receive market data for a set of orders for the instrument.
5. Enter the quantities (tag 271-MDEntrySize) and prices (tag 270-MDEntryPx) on the book.
6. Click "**Submit**."

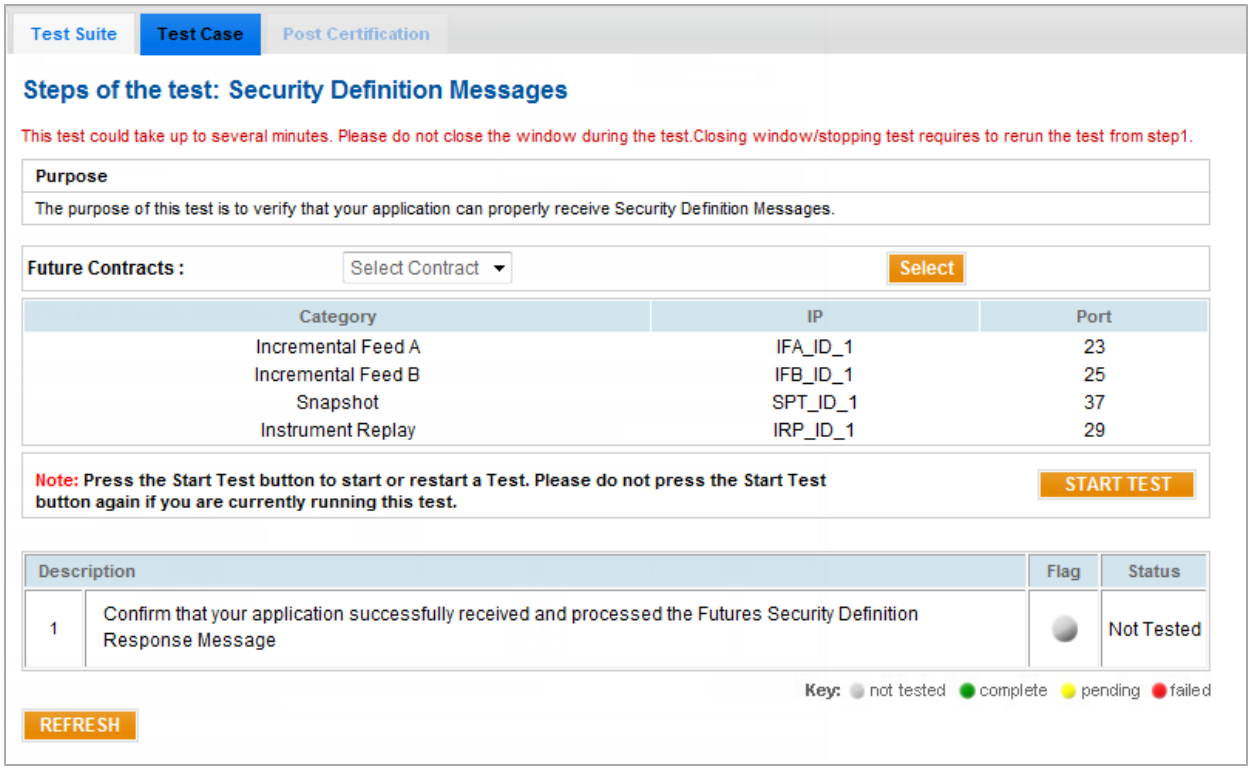


7. Receive a Book Reset message.
8. Receive the resent book.
9. Enter the quantities and prices on the book.
10. Click "**Submit**."



Security Definition Messages

This test verifies that your application can properly receive and process the Security Definition (tag 35-MsgType=d) message for Futures instruments.


Test Suite
Test Case
Post Certification
Steps of the test: Security Definition Messages
This test could take up to several minutes. Please do not close the window during the test.Closing window/stopping test requires to rerun the test from step1.
Purpose
The purpose of this test is to verify that your application can properly receive Security Definition Messages.
Future Contracts :
Select Contract
Select
Category
IP
Port
Incremental Feed A
IFA_ID_1
23
Incremental Feed B
IFB_ID_1
25
Snapshot
SPT_ID_1
37
Instrument Replay
IRP_ID_1
29
Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test.
START TEST
Description
Flag
Status
1
Confirm that your application successfully received and processed the Futures Security Definition Response Message
Not Tested
Key: not tested complete pending failed
REFRESH

To run the Security Definition Messages test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click "**START TEST**."

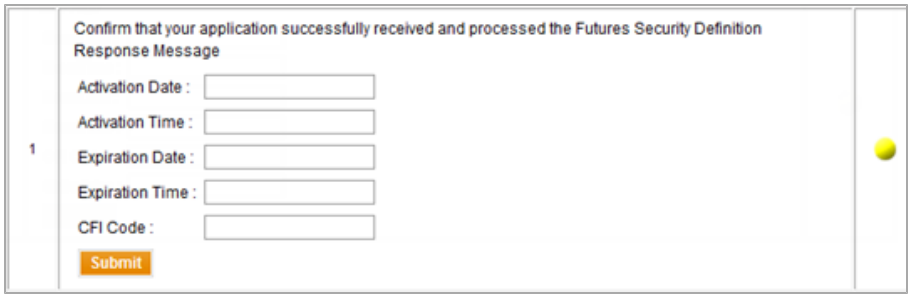
   Note: DO NOT select the **"START TEST"** button once the test process is in progress.

3. Confirm that your application received and processed the Futures Security Definition Response message.

   Enter the following tag values:

   - Activation Date (tag 866-EventDate, when tag 865-EventType=5)
   - Activation Time (tag 1145-EventTime, when tag 865-EventType=5)
   - Expiration Date (tag 866-EventDate, when tag 865-EventType=7)
   - Expiration Time (tag 1145-EventTime, when tag 865-EventType=7)
   - tag 461-CFICode

   Click "**Submit**."


Confirm that your application successfully received and processed the Futures Security Definition Response Message
Activation Date :
Activation Time :
Expiration Date :
Expiration Time :
CFI Code :
Submit
1

Market States and Market Statistics Messages (Futures)

This test verifies that your application can properly receive and process market states [Security Status (tag 35-MsgType=f) message] and statistics [Market Data Incremental Refresh (tag 35-MsgType = X) message] for Futures instruments.

Test Suite | Test Case | Post Certification

Steps of the test: Market States and Market Statistics Messages - Futures

This test could take up to several minutes. Please do not close the window during the test.Closing window/stopping test requires to rerun the test from step1.

Purpose

The Purpose of this test is to verify that your application can properly receive and process information related to market states and statistics throughout a trading session.

Selected Contract : EBPM3,EBPK3,EBPM3-EBPK3 - 703 Unlock

Category	IP	Port
Incremental Feed A	IFA_ID_1	23
Incremental Feed B	IFB_ID_1	25
Snapshot	SPT_ID_1	37
Instrument Replay	IRP_ID_1	29

Note: Press the Start Test button to start or restart a Test. Please do not press the Start Test button again if you are currently running this test. START TEST

	Description	Flag	Status
1	The market state is sent. AutoCert+ prompts you to enter the current market state of your application.		Not Tested
2	The market changed states. AutoCert+ prompts you to enter the current market state of your application.		Not Tested
3	The market changed states. AutoCert+ prompts you to enter the current market state of your application		Not Tested
4	The market changed states. AutoCert+ prompts you to enter the current market state of your application.		Not Tested
5	Trade reports and a change of market statistics are sent.AutoCert+ prompts you to enter the trade statistics.		Not Tested
6	The market changed states. AutoCert+ prompts you to enter the current market state of your application.		Not Tested
7	Your application will receive a Market Open/Continuous Trading event.		Not Tested
8	AutoCert+ is simmulating a market halt event triggered by a cascade of stop orders. Your application will receive an instrument trading halted event.		Not Tested
9	AutoCert+ is simulating a GCC correction of the market and resumed trading of instruments. Your application will receive an instrument trading resumed and simulated prices event.		Not Tested
10	Trade statistics are sent.AutoCert+ prompts you to enter the trade price and qty.		Not Tested

Key: not tested complete pending failed

REFRESH

To run the Market States and Market Statistics Messages - Futures test:

1. From the **Contract** drop-down, select the desired contract if the contract is not already locked.
2. Click "**START TEST**."

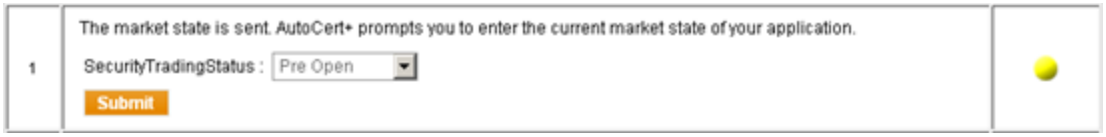
Note: DO NOT select the **"START TEST"** button once the test process is in progress.

Note: Once you reserve an instrument, no other tester can use it.

AutoCert+ displays the IP addresses and port numbers for channels.

3. Select the current market state as indicated in the Security Status (tag 35-MsgType=f) message that your application received. Repeat for the next 3 steps.

   Click "**Submit**."


1
The market state is sent. AutoCert+ prompts you to enter the current market state of your application.
SecurityTradingStatus :
Pre Open
Submit

4. Enter the applicable trade statistics from the Market Data Incremental Refresh (tag 35-MsgType = X) message that your application received.
   - Last Trade Price (tag 270-MDEntryPx when tag 269-MDEntryType=2)
   - Quantity (tag 271-MDEntrySize)
   - Lowest Trade Price (tag 270-MDEntryPx when tag 269-MDEntryType=8)
   - Highest Trade Price (tag 270-MDEntryPx when tag 269-MDEntryType=7)
5. Click "**Verify**."

6. Select the current market state as indicated in the Security Status (tag 35-MsgType=f) message that your application received.
7. Click "**Submit**."

6
The market changed states. AutoCert+ prompts you to enter the current market state of your application.
SecurityTradingStatus :
Pre Open
Submit

8. Receive a Security Status (tag 35-MsgType=f) message indicating a Market Open/Continuous Trading event.

7
Your application will receive a Market Open/Continuous Trading event.
8
AutoCert+ is simmulating a market halt event triggered by a cascade of stop orders. Your application will receive an instrument trading halted event.
9
AutoCert+ is simulating a GCC correction of the market and resumed trading of instruments. Your application will receive an instrument trading resumed and simulated prices event.

9. Receive a Security Status (tag 35-MsgType=f) message indicating an instrument trading halted event (tag 326-SecurityTradingStatus=2, tag 327-HaltReason=1).
10. Receive a Security Status (tag 35-MsgType=f) message indicating an instrument trading resumed and simulated prices event (tag 1174-SecurityTradingEvent=2).

11. Enter the applicable trade statistics from the Market Data Incremental Refresh (tag 35-MsgType=X) message that your application received.
    - Last Trade Price (tag 270-MDEntryPx when tag 269-MDEntryType=2)
    - Quantity (tag 271-MDEntrySize)
    - Lowest Trade Price (tag 270-MDEntryPx when tag 269-MDEntryType=8)
    - Highest Trade Price (tag 270-MDEntryPx when tag 269-MDEntryType=7)
12. Click "**Verify**."